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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/776,694

02/12/2004

Nam Ngo

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SCHNECK & SCHNECK
P.O. BOX 2-E
SAN JOSE, CA 95109-0005

EXAMINER

BODAWALA, DIMPLE N

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

07/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/776,694

Applicant(s)

NGO ET AL

Examiner

DIMPLE N. BODAWALA

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6 and 7 is/are pending in the application.
4a) Of the above claim(s) 5 and 8-20 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4, 6 and 7 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. Applicant's election of Group I, claims 1-4, 6 and 7 in the reply filed on 4/25/2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Oath/Declaration

4. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either an application data sheet or supplemental oath or declaration.

Claim Objections

5. Claim 1 is objected to because of the following informalities: claim 1 is objected because claim 1 cites typographical error in line 5 such as "the said". Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 recites the limitation "the cylindrical wells" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (US 6,261,497) in view of Ellman et al. (US 2005/0048667).

13. Wong et al. ('497) discloses an invention for making controlled pore glass-synthetic resin article which comprises step of mixing polyalkylene with silane-modified CPG; heating the mixture; cooling the mixture (See col.2 lines 59 through col.3 line 15), Wherein polyalkylene is selected from solid polyolefin such as polyethylene, polypropylene, etc (See col.2 lines 30-35). It further suggests that the controlled pore glass bead of CPG has been modified with amino (See col.3 lines 18-25). It further teaches that the quantity of the polyalkylene is preferably about 60% based on total weight of the mixture (See example 1).

14. Here, claim 6 cites product limitation such as embedded device contains less than 10 micromoles of reactive amino or mercapto moieties as further limitation of the subject matter. There is no patentability weight for product limitation in process invention, since product fails to cite process steps as further limitation. Furthermore, claim 6 fails to cite size of the device which has less than 10 micromole of reactive amino or mecapto moieties. The prior

art, Wong et al. (US 6,261,497) teaches that the device contains reactive amino (See col.3 lines 19-21) for reacting with biological molecules, which could have been obvious to manufacture the device contains less than 10 micromoles of reactive amino as recited in the claim of the instant application.

15. Wong et al. discloses all claimed process steps as discussed above, but fails to teach or suggest aluminum plate with cylindrical well.

16. Ellman et al. ('667) discloses a method for making solid phase support which comprises steps of providing a substrate with reaction vessel (or cylindrical well) (see abstract), wherein substrate is made of metal such as aluminum with multiple wells such as 8-1536 wells to facilitate expulsion of mixture from the well (See paragraph # 45, 46, 47); dispensing particles (Silane-modified controlled pore glass CPG) in the well (See abstract, paragraph # 41, 43). It further teaches that the CPG particles are modified with amino (See paragraph # 45). It further teaches that the temperature of the substrate varied in desired range by setting the heating assembly (See paragraph # 64,69), wherein heating assembly is capable to heat the plate in claimed range of the instant application, and finally step of releasing by using releasing sheet.

17. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Wang et al. by providing an aluminum plate with plurality of cylindrical well of Ellman et al. because such an alignment is involved to provide sufficient support to the mixture within the well during the manufacturing process, which gives the benefit to produce embedded device with desired features.

18. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellman et al. (US 2005/0048667) in view of Wong et al. (US 6,261,497).

19. Ellman et al. ('667) discloses a method for making solid phase support which comprises steps of providing a substrate with reaction vessel (or cylindrical well) (see abstract), wherein substrate is made of metal such as aluminum with multiple wells such as 8-1536 wells to facilitate expulsion of mixture from the well (See paragraph # 45, 46, 47); dispensing particles (Silane-modified controlled pore glass CPG) in the well (See abstract, paragraph # 41, 43). It further teaches that the CPG particles are modified with amino (See paragraph # 55). It further teaches that the temperature of the substrate varied in desired range by setting the heating assembly (See paragraph # 64,69), wherein heating assembly is capable to heat the plate in

claimed range of the instant application, and finally step of releasing by using releasing sheet.

20. Ellman et al. discloses all claimed process limitations as discussed above. It further teaches that the well of aluminum plate is filled with CPG beads or particles, but fails to teach or suggest the step of providing mixture of polyalkylene with CPG.

21. Wong et al. ('497) discloses an invention for making controlled pore glass-synthetic resin article which comprises step of mixing polyalkylene with silane-modified CPG; heating the mixture; cooling the mixture (See col.2 lines 59 through col.3 line 15), Wherein polyalkylene is selected from solid polyolefin such as polyethylene, polypropylene, etc (See col.2 lines 30-35). It further suggests that the controlled pore glass bead of CPG has been modified with amino (See col.3 lines 18-25). It further teaches that the quantity of the polyalkylene is preferably about 60% based on total weight of the mixture (See example 1).

22. Here, claim 6 cites product limitation such as embedded device contains less than 10 micromoles of reactive amino or mercapto moieties as further limitation of the subject matter. There is no patentability weight for product limitation in process invention, since product fails to cite process steps as further limitation. Furthermore, claim 6 fails to cite size of the device which

has less than 10 micromole of reactive amino or mecapto moieties. The prior art, Wong et al. (US 6,261,497) teaches that the device contains reactive amino (See col.3 lines 19-21) for reacting with biological molecules, which could have been obvious to manufacture the device contains less than 10 micromoles of reactive amino as recited in the claim of the instant application.

23. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Ellman et al. by providing step of mixture of Wang et al. because such an alignment is involved to manufacture cylindrical polyalkylene embedded silane modified CPG device which can be ease to use in the synthesis of nucleic acids or isolation or purification of nucleic acids and proteins.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIMPLE N. BODAWALA whose telephone number is (571)272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PHILLIP C. TUCKER can be reached on (571) 272-

1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dimple N Bodawala
Examiner
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Examiner, Art Unit 1791

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